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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SERGE RESTLE and CLAUDE DUBIEF

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Appeal 2008-0608  
Application 09/360,521  
Technology Center 1600

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Decided: June 19, 2008

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Before ERIC GRIMES, RICHARD M. LEOVITZ, and JEFFREY N. FREDMAN,  
*Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* GRIMES.

Opinion Dissenting filed by *Administrative Patent Judge* FREDMAN.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a cosmetic composition, which the Examiner has rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

## BACKGROUND

The Specification discloses

cosmetic compositions with improved properties intended simultaneously for cleaning and for conditioning keratinous substances, such as the hair, and comprising, in a cosmetically acceptable aqueous vehicle, a washing base composed of anionic and amphoteric surfactants in which is also present an aminated silicone having an amine number greater than or equal to 0.4 meq/g.

(Spec. 1.)

## DISCUSSION

### 1. CLAIMS

Claims 1-47 are pending and on appeal. Claim 1 is representative and reads as follows:

1. A detergent and conditioning cosmetic composition, comprising:

(A) a washing base comprising at least one anionic surfactant and at least one amphoteric surfactant, wherein the amphoteric surfactant/anionic surfactant ratio by weight is greater than or equal to 0.2:1;

(B) a conditioner system comprising at least one aminated silicone having an amine number greater than or equal to 0.4 meq/g, said at least one aminated silicone being chosen from:

(a) aminated silicone polymers corresponding to the formula:



in which:

G is chosen from a hydrogen atom, phenyl, OH, and C<sub>1</sub>-C<sub>8</sub> alkyl groups;

a is chosen from 0, 1, 2, and 3;

b is chosen from 0 and 1;

m and n are chosen from numbers such that the sum (n+m) varies from 1 to 2000;

R' is chosen from monovalent radicals of formula  $-C_qH_{2q}L$ , wherein q is chosen from a number ranging from 2 to 8 and L is chosen from optionally quaternized amino groups chosen from:

$-N(R'')-CH_2-CH_2-N(R'')_2$ ,

$-N(R'')_2$

$-N^+(R'')_3A^-$ ,

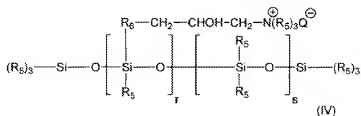
$-N^+H(R'')_2A^-$ ,

$-N^+H_2(R'')A^-$ , and

$-N(R'')-CH_2-CH_2-N^0[ \text{sic, } N^+? ]R''H_2A^-$ ,

wherein R'', which are identical or different, are chosen from a hydrogen atom, and phenyl, benzyl and saturated monovalent hydrocarbon-comprising radicals, and A<sup>-</sup> is chosen from organic and inorganic anions; and

(b) cationic silicone polymers corresponding to the following formula (IV)



in which:

R<sub>5</sub> is chosen from monovalent hydrocarbon-comprising radicals having from 1 to 18 carbon atoms;

R<sub>6</sub> is chosen from divalent hydrocarbon-comprising radicals;

Q<sup>-</sup> is chosen from organic and inorganic anions;

r represents a mean statistical value ranging from 2 to 20;

s represents a mean statistical value ranging from 20 to 200; and

(C) at least one cationic polymer;

wherein the composition is transparent.

## 2. OBVIOUSNESS I

Claims 1-32, 34-41 and 43-47 stand rejected under 35 U.S.C. § 103(a) as obvious in view of Decoster '747<sup>1</sup> and Decoster '211.<sup>2</sup> The Examiner relies on Decoster '747 for disclosing a composition meeting the claim limitations (Ans. 3-4) except for “the preferred aminated silicones, the preferred amount of solvent, and a teaching of transparency” (*id.* at 4). The Examiner cites Decoster '211 as teaching or suggesting the remaining limitations (*id.* at 4-5). With respect to the limitation requiring an “aminated silicone having an amine number greater than or equal to 0.4 meq/g” (claim 1), the Examiner concludes:

It would have been obvious to one of ordinary skill in the art at the time of the invention to exemplify an amodimethicone . . . of the instant invention with an meq/g of 0.5 because (1) both '747 and '211 teach detergent cosmetic compositions for hair care; (2) both '747 and '211 teach a composition comprising a washing base and a conditioning system wherein the conditioning system comprises at least one cationic polymer and an aminosilicone; and (3) '211 teaches that the aminosilicone should be formulated such that the meq/g is 0.5. One would have been motivated to formulate the aminosilicone to have an meq/g of 0.5 because of an expectation of success in preparing a detergent cosmetic composition, as taught by '747.

(Ans. 5-6.) The Examiner also points out that Decoster '211 teaches that the aminosilicones used in its compositions can have amine numbers of 0.01 to 1 meq/g (*id.* at 10).

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<sup>1</sup> Decoster et al., U.S. Patent 6,451,747 B1, issued Sept. 17, 2002.

<sup>2</sup> Decoster et al., WO 97/46211, published Dec. 11, 1997. Our citations are to the English-language translation of record.

Appellants argue that the aminosilicones used by Decoster '747 and Decoster '211 are structurally different and “no logical line of reasoning has been presented, nor do Appellants believe it exists, as to why one skilled in the art would take an amine value from a structurally different compound to use with the aminated silicone disclosed in Decoster [‘747]” (App. Br. 18).

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). The obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). But the Examiner must still show that a person of ordinary skill in the art would have had a reason to combine known elements in a way that results in the claimed invention. *See id.* at 1741 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”); *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 n.3 (Fed. Cir. 2008)(“We must still be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention.”).

In this case, we agree with Appellants that the Examiner has not shown that the composition would have been obvious in view of the cited references. The claimed composition includes an aminated silicone

corresponding to one of two specific formulas and having an amine number of at least 0.4 meq/g.

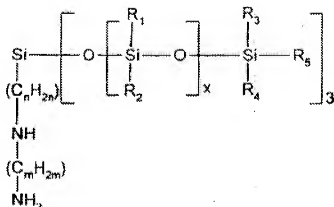
Decoster '747 discloses hair care compositions that include aminated silicones having the formulas recited in the instant claims. (See Decoster '747, col. 17, ll. 29-67; col. 18, ll. 20-43.) The Examiner concedes, however, that Decoster '747 does not teach aminated silicones having an amine number of at least 0.4 meq/g<sup>3</sup> (Ans. 9). The Examiner cites the teaching in Decoster '211 of hair care compositions comprising aminated silicones with an amine number of 0.01 to 1 meq/g, and specifically 0.5 meq/g, for the suggestion of aminated silicones with the amine number required by the instant claims (*id.* at 5-6, 10).

Decoster '211 discloses hair care compositions comprising an aminated silicone (Decoster '211 at 5). Decoster '211 discloses that the specific aminated silicone is important to the properties of the disclosed compositions: “[B]y using a particular aminated and appropriately selected silicone as defined subsequently, in detergent compositions . . . , it is possible to improve greatly the properties belonging to the latter” (*id.* at 4).

The “particular aminated silicone” has the following formula (I):

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<sup>3</sup> As we understand it, the amine number is a measure of the number of amine groups in a given amount of aminated silicone, and for a given compound within the scope of the recited formulas, the amine number would vary depending on how the substituents are varied.



where  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ , and  $\text{R}_4$  are identical or different and are a  $\text{C}_1$ - $\text{C}_4$  alkyl radical or a phenyl group;  $\text{R}_5$  is a  $\text{C}_1$ - $\text{C}_4$  alkyl radical or a hydroxyl group;  $n$  and  $m$  are whole numbers from 1 to 5; and  $x$  is chosen so that the amine number is 0.01 to 1 meq/g (*id.* at 5). In a working example, Decoster '211 exemplifies a species of the above aminated silicone in which  $\text{R}_1$ - $\text{R}_5$  are all methyl,  $m = 2$ ,  $n = 3$ , and " $x$  is chosen so that the amine index is about 0.5 meq/g" (*id.* at 30-31).

Thus, both the generic aminated silicone and the exemplified species used by Decoster '211 differ in structure from the aminated silicones disclosed by Decoster '747 (and required by the instant claims). In fact, the comparative example of Decoster '211 ("composition B," *id.* at 30) includes the same "DC 939" aminated silicone that is used in the inventive composition of Decoster '747 (Decoster '747 at col. 20, ll. 34-35; Decoster '211 at 31). That amine silicone apparently has an amine number of <0.1 meq/g (Spec. 23, composition 6).

We agree with Appellants that the Examiner has not adequately explained why a person of ordinary skill in the art would have been led to modify the aminated silicone in Decoster '747 to have an amine number of at least 0.5 meq/g. Decoster '211 does not attribute the desirable properties



of its composition solely to the amine number of the aminated silicone in it. Indeed, it indicates that the composition has the desirable properties even if the aminated silicone has an amine number as low as 0.01 meq/g, and does not have the desirable properties if the aminated silicone is DC 939, which has an amine number within the 0.01 to 1 meq/g required by Decoster '211.

Thus, those of skill in the art would not have understood Decoster '211 to teach that any amine silicone having an amine number of, e.g., 0.5 meq/g would provide the same desirable properties to a shampoo composition. A skilled artisan would have understood Decoster '211 to teach that the specific aminated silicone of Decoster '211's formula (I) was critical to the properties of the disclosed composition. Decoster '211 states, for example, that

- “the *essential* elements that are included in the composition of the products according to the invention are (A) a washing base, (B) a conditioning system that includes (I) cationic polymer(s), (II) *particular* aminated silicone(s)” (Decoster '211 at 6, emphases added); and

- “According to an *essential* characteristic of the detergent compounds in conformity with the invention the latter contain in addition a[t] least one amine silicone with formula (I) defined earlier” (*id.* at 27, emphasis added).

The Examiner has not adequately shown that the cited references would have suggested the instantly claimed composition to a person of ordinary skill in the art. We therefore reverse the rejection of claims 1-32, 34-41 and 43-47 under 35 U.S.C. § 103 in view of Decoster '747 and Decoster '211.

### 3. OBVIOUSNESS II

Claims 33 and 42 stand rejected under 35 U.S.C. § 103(a) as obvious in view of Decoster '747, Decoster '211, and Naito.<sup>4</sup> The Examiner relies on Decoster '747 and Decoster '211 as discussed above, and cites Naito in order to meet the additional limitations of claims 33 and 42 (Ans. 7-8).

The Examiner has pointed to nothing in Naito that would remedy the deficiency in the combination of Decoster '747 and Decoster '211. We therefore reverse this rejection of the reasons discussed above.

#### SUMMARY

The Examiner has not established a prima facie case of obviousness. We therefore reverse the rejections on appeal.

#### REVERSED

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<sup>4</sup> Naito et al., U.S. Patent 5,476,649, issued Dec. 19, 1995.

FREDMAN, *Administrative Patent Judge*, dissenting.

I respectfully dissent from the majority's conclusion with regard to the obviousness rejections under 35 U.S.C. § 103(a). I would affirm the obviousness rejections of claims 1-47 because I feel that application of the obviousness caselaw to the evidence of record supports a conclusion that these claims are obvious.

*35 U.S.C. § 103(a) rejection over Decoster '747 and Decoster '211*

The Appellants argue that “no logical line of reasoning has been presented, nor do Appellants believe it exists, as to why one skilled in the art would take an amine value from a structurally different compound to use with the aminated silicone disclosed in Decoster '767” (App. Br. 18). Appellants further contend that “Decoster '747 teaches away from the use of an amine number of greater than or equal to 0.4 meq/g by disclosing that aminosilicones with amine numbers less than 0.1 meq/g are advantageous” (App. Br. 20).

Appellants note that “none of the references disclose an aminated silicone, as claimed, with an amine value of greater than or equal to 0.4 meq/g. Moreover, Decoster '747 makes no suggestion to substitute an amine value of less than 0.1 meq/g for an amine value of greater than or equal to 0.4 meq/g” (App. Br. 21). Appellants also argue that there would have been “no reasonable certainty in selecting the proper surfactant ratio and aminated silicone to create a transparent and stable composition” (App. Br. 23).

The Examiner responds that

The only difference between the prior art and the claims at issue is that the instant claims recite a further limitation wherein the amine number is greater than or equal to 0.4 meq/g. Thus, '747 teaches a genus of aminated silicones wherein the amine number could be anything, whereas the instantly claimed invention is a subgenus thereof wherein the amine number could be anything, so long as it is greater than 0.4 meq/g.

(Ans. 9.) The Examiner contends that since “one of ordinary skill in the art would recognize an aminated silicone with an amine index value of 0.5 meq/g as useful in a detergent cosmetic composition for the hair is sufficient suggestion to render the instant claims obvious over ‘747” (Ans. 10).

The Examiner argues that “one of ordinary skill in the art would have recognized the teachings of ‘747 as consistent with those of ‘211 and would have been further motivated to look to ‘211 to determine the skill of the art as it pertained to the amine index values of aminated silicones for use in a detergent cosmetic composition for the hair” (Ans. 11).

In view of these conflicting positions, I would frame the obviousness issues as follows:

Would it have been obvious to a person of ordinary skill to choose an amine index value of 0.5 as applied to an aminosilicone from Decoster ‘211 in order to alter the aminosilicone of Decoster ‘747 to an amine index value of 0.5?

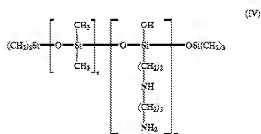
### *Findings of Fact*

1. Decoster ‘747 discloses a washing base with an anionic surfactant, sodium lauryl ether sulphate, and an amphoteric surfactant, cocoylbetaine, where the ratio by weight is 0.23, which is greater than 0.2:1 (*see* Decoster ‘747, col. 20, ll. 10-40).
2. Decoster ‘747 teaches multiple different formulas for aminated silicones where the formulas are similar to those in claim 1 (Decoster ‘747, col. 17-18). Specifically, Decoster ‘747 formula (III) at col. 17, line 31 is identical to formula (I) of claim 1 with the definitions of the pendant groups such as R, R’, R’’, etc. being similar, though not precisely identical (*see* Decoster ‘747, col. 17, ll. 31-67). Decoster

'747 formula V at col. 18, line 25 is identical to formula (IV) with similar pendant groups (*see* Decoster '747, col. 18, ll. 30-45).

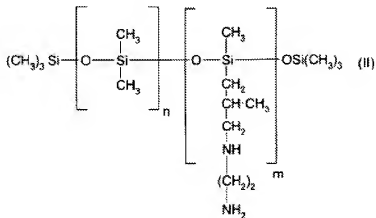
3. Decoster '747 discloses the use of a cationic polymer in a shampoo composition (*see* Decoster '747, col. 20, l. 24, Example 1).

4. Decoster '747 discloses the use of a conditioner comprising an aminated silicone with the formula disclosed below.



Structure of trimethylsilylamodimethicone shown above. (*see* Decoster '747, col. 17, ll. 10-24.)

5. The Specification teaches an aminated silicone which falls within the scope of claim 1 with the formula disclosed below.

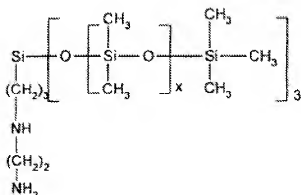


Structure of trimethylsilylamodimethicone shown above (*see* Spec 11:7-18).

6. The Specification discloses that a variety of different chemical structures with amine values greater than 0.4 demonstrate transparency (*see* Spec. 22-23).

7. Decoster '211 teaches with regard to the aminated silicone that "x is chosen so that a subscript of the amine is between 0.01 and 1 meq/g" (Decoster '211 5).

8. Decoster '211 teaches an aminated silicone with an x chosen so that the amine index is about 0.5 meq/g with the formula disclosed below.



Structure of amino silicone shown above (*see* Decoster '211 31:1-10).

9. Decoster '211 teaches that when the aminated silicone with the amine index of 0.5 meq/g is chosen for composition A, "[a]ll the experts indicate a clear improvement of these properties for the hair treated with the composition A according to the invention" (Decoster '211 31).

*Discussion of 35 U.S.C. § 103(a) over Decoster '747 and Decoster '211*

Decoster '747 teaches a composition which comprises a washing base with an anionic and amphoteric surfactant, with a weight ratio of the amphoteric to ionic surfactant that is greater than 0.2 (FF 1) as required by claim 1. Decoster '747 also teaches incorporation of aminated silicones into the composition, specifically teaching the exact same formulas as those incorporated into claim 1 (FF 2, 4-5). Decoster '747

teaches inclusion of a cationic polymer into the composition as required by claim 1 (FF 3).

The Examiner acknowledges that Decoster '747 does not teach two elements of the claim, that the aminated silicone has amine index of 0.4 meq/g or greater and that the composition is transparent (Ans. 4). The Examiner relies upon Decoster '211 for the disclosure to select an aminated silicone with an amine index of 0.5 meq/g (FF 7-9). The Examiner argues that the composition resulting from the motivation of Decoster '747 and Decoster '211 will necessarily be transparent (Ans. 7).

The obviousness case rests on whether a person of ordinary skill in the art would have considered it obvious to choose a number of repeating units in an aminated silicone of Decoster '747 that would result in an amine index of greater than 0.4 meq/g based upon the teaching in Decoster '211 of an aminated silicone with an amine index of 0.5 meq/g.

I conclude that the Examiner has set forth a prima facie case that claim 1 would have been obvious to the ordinary artisan in view of Decoster '747 and Decoster '211. In *KSR*, the Supreme Court indicated that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007). The evidence shows a large number of very similar amine silicone structures disclosed in Decoster '747 and in claim 1 and the Specification, where the central variable between the structures which would relate to the amine index is the number of silicone repeating units.

I think that Decoster '211 recognized that the predictably critical variable in controlling the amine index was the value for x, the number of repeating units (FF 6-

9). As Decoster '211 stated "x is chosen so that the amine index is about 0.5 meq/g." (Decoster '211 31.) This difference in repeating units represents the central structural difference between the amine silicone in Invention A in Decoster '211 and the amine silicone in Invention B (*see* Decoster '211 30, Example). While the structures also represent isomers of one another with regard to the positioning of one of the silicone chains, Decoster '211 only teaches one difference that was specifically selected to improve the composition, the value of x and the resultant amine index of 0.5 meq/g (FF 7). In my opinion, the ordinary practitioner would have predictably applied that value of a repeating unit to the compositions of Decoster '747 and that resultant amine index value, in order to obtain the improvements recognized by Decoster '211 of improved hair properties after shampoo application (FF 8-9).

I am not persuaded by Appellants argument that "no logical line of reasoning has been presented, nor do Appellants believe it exists, as to why one skilled in the art would take an amine value from a structurally different compound to use with the aminated silicone disclosed in Decoster '767 [sic 747]" (App. Br. 18). I think that Decoster '211 set out the number of repeating units, and the consequent amine index value, as the central variable which distinguished the desired aminosilicone from the Decoster '747 aminosilicones. The only specifically selected value in the structure of Decoster '211 was x and it was selected to obtain a specific amine value (FF 7). I think that selection of the amine value desired by Decoster '211 for use in the similar aminosilicone compounds in Decoster '747 based upon the express teaching of Decoster '211 is suggested by the success of Decoster '211 and is predictably obvious to the ordinary artisan in this field, and minimally obvious to try. "In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." *KSR*, 127 S.Ct 1727 at 1742.



I am also not persuaded by Appellants argument that Decoster '747 teaches away from amine numbers greater than 0.4 meq/g simply because it teaches amine silicones with amine numbers that are less than 0.1 meq/g (*see* App. Br. 20). When Appellants identify Fluid DC 939 as desirable by Decoster '747, that does not teach away from the use of higher amine numbers (App. Br. 21). The Federal Circuit notes "We will not read into a reference a teaching away from a process where no such language exists." *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1364 (Fed. Cir. 2006). Here, there is no specific language which teaches away from the use of amine numbers greater than 0.4 meq/g. In fact, the only evidence of record discussing these number is the teaching by Decoster '211 that a range of 0.1 to 10 meq/g is included in the invention and that a specific compound with 0.5 meq/g shows superior results (FF 7-9).

Appellants then argue that the "Examiner has also, in effect, ignored the 'transparency' limitation required by the present claims. Rather than providing a substantive response, the Examiner relies on the incantation of general legal concepts" (App. Br. 22). I also would not find this argument persuasive since it attempts to improperly reallocate the burden of production.

The Examiner has presented a prima facie case of obviousness, showing that the prior art of Decoster '747 is virtually identical to the elements of the claim, including the surfactant ratio, except for the amine number and transparency limitations. The Examiner cited Decoster '211 to render the amine number limitation prima facie obvious. The Examiner properly argues that a composition which falls precisely within the scope of Appellants claim will have the inherent properties required by that claim. As the CCPA noted in *Best*, "[w]here, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or

substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product.” *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977).

Additionally, the Federal Circuit noted in *Dillon*, “[t]here is no question that all evidence of the properties of the claimed compositions and the prior art must be considered in determining the ultimate question of patentability, but it is also clear that the discovery that a claimed composition possesses a property not disclosed for the prior art subject matter, does not by itself defeat a prima facie case.” *In re Dillon*, 919 F.2d 688, 693 (Fed. Cir. 1990).

I am also not persuaded by Appellants arguments that “the comparative examples in the present specification provide evidence of a lack of expectation of success in making the modifications suggested by the Examiner” (App. Br. 23). Appellants point to a comparison of compound B, with a surfactant ratio of 0.14 as not transparent and composition A with a surfactant ratio of 0.33, which was transparent (*see* App. Br. 23). However, the surfactant ratio disclosed in the Decoster ‘747 examples was 0.23, which is not only between the ratios in Appellants’ examples, but is greater than the ratio required by Appellants claim. Thus, to the extent that Appellants argue that a ratio of 0.23 would not function, they are arguing that the claim is not enabled for its entire scope.

I would affirm the rejection of claim 1 as obvious over Decoster ‘747 and Decoster ‘211. I would affirm the rejection further including Naito for the same reasons as given above.

Appeal 2008-0608  
Application 09/360,521

Ssc:

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